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water  
drops present in the form of a mist in the air are

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precipitated on the bulkhead and drop down to the well bottom.

In a known assembly space (DE-C-198 11 189), the water separator is formed by a filter housing which is arranged below the access orifice and of which the housing orifice surrounding an air filter points downward, that is to say away from the access orifice. The outlet of the filter housing is placed congruently on a wall orifice in the dashboard separating off the passenger space. That region of the filter housing which faces the access orifice runs, in the installation position, obliquely downward in a direction pointing away from the dashboard and is provided at the end with a water collecting channel which guides the water dropping in from outside through the access orifice past the filter housing laterally. The filter in the inlet of the filter housing is consequently not wetted by the water running out.

In a vehicle with a front window and windshield wiper (FR-A-2 623 455), it is known, by means of a [lacuna] in an assembly space which receives the windshield wiper motor and the windshield wiper mechanism and which is sealed off relative to the engine space, to provide a drip molding underneath the front window for discharging the water running off on the front window. The molding wall, facing away from the front window, of the drip molding is drawn up as far as the hood and possesses an orifice, via which air can flow into the assembly space and from there to an orifice in the dashboard separating off the passenger space. The molding wall having the orifice is prolonged downward

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beyond the molding bottom and forms a water separator. By means of this water separator, the air flowing into the assembly space is deflected through more than 90° before it can arrive at the dashboard orifice.

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The object on which the invention is based is to combine more cost-effectively in structural terms an assembly space of the type initially mentioned with an air supply for the supply of fresh air to an air consumer arranged in the passenger space, for example to a ventilation blower for the passenger space or to a blower of an air conditioning system.

10 The object is achieved, according to the invention, by means of the features of patent claim 1.

15 The assembly space according to the invention has the advantage of a combination, cost-effective with regard to the manufacturing costs, of the fresh air supply to the passenger space and of an easily accessible reception box for various operating assemblies and components, such as a battery, lines and a servomotor and windshield wiper motor, around which fresh air flows. By virtue of the combination, a separate air supply device, such as provided in DE 197 34 146 A1, becomes unnecessary, so that, by the air supply device being dispensed with, the installation space to be reserved in the engine space is also reduced to a considerable extent. The assembly space according to 20 the invention, because of its very low construction space requirement, is particularly suitable for vehicles of the compact class. The water separator formed on the lower shell ensures a very good

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dehumidification of the air entering the passenger space or supplied to the air conditioning system. Preferably, the lower shell is fastened to the underside of the hood and consists of sheet metal,  
5 although it is possible for the hood inner panel to be formed as a lower shell in the region of the assembly space, so that no additional component is necessary for the lower shell. Overall, the incoming air connection between the air inlet orifice in the hood and the  
10 assembly space with water separator can be configured optimally with regard to the manufacturing costs and to the installation space.

Advantageous embodiments of the assembly space  
15 according to the invention, together with expedient developments and refinements of the invention, are specified in the further patent claims.

According to an advantageous embodiment of the  
20 invention, a lower shell is provided which covers the air inlet orifice in the hood and is sealed off relative to the hood and which can be placed onto the continuous seal surrounding the access orifice and, within its region surrounded by the continuous seal,  
25 has an air passage orifice. Preferably, the lower shell is fastened to the underside of the hood and consists of sheet metal, although it is possible for the hood inner panel to be formed as a lower shell in the region of the assembly space, so that no additional component  
30 is necessary for the lower shell. By virtue of these structural measures, the incoming air connection between the air inlet orifice in the hood and the assembly space with water separator can be configured

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optimally with regard to the manufacturing costs and to  
the installation space required.

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the closed hood 17 is pressed with its underside. The cover 27 thus covering the

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access orifice 15 has an air passage orifice 45 and a water separator 38. For this purpose, an air guide plate 40 is cut out from a covering surface spanning the clear orifice within the collar 28 and is bent out  
5 of the covering surface in such a way that it projects through the access orifice 15 and runs obliquely with respect to the axis of the access orifice 15. This results at the free edge of the air guide plate 40, toward the lower front edge of the collar 28, in the  
10 formation of an air passage orifice 45 which lies on the front side, facing away from the dashboard orifice 16, of the air guide plate 40, so that the air flowing into the assembly space 10 via the air inlet orifice 21 in the hood 17 and via the air passage orifice 45 is  
15 deflected through somewhat less than 180° and, on the rear side of the air guide plate 40, flows to the dashboard orifice 16 forming the waste air orifice 43 of the assembly space 10 and at the same time washes around the operating assemblies within the assembly  
20 space 10. At the leading edge of the air guide plate 40, which may likewise be provided with a web 401, the water droplets in the form of a mist which are precipitated on the air guide plate 40 from the moist air drop down as condensation water drops to the bottom  
25 36 of the assembly space 10.

It is also possible to design the assembly space 10 as a separate plastic box open at the top which is mounted between the dashboard 13 and partition 14. The outflow  
30 orifice 43 is then arranged in the box wall bearing against the dashboard 13, in such a way that said outflow orifice is congruent with the dashboard orifice 16. The box bottom has introduced in it, at a somewhat

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lower point, the water outflow 39 which may be designed as a simple hole or as an outwardly projecting connection piece.

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DaimlerChrysler AG

Patent Claims

5    1. An assembly space for a motor vehicle for the reception of operating assemblies, which is mounted in front of a dashboard (13) separating a passenger space (12) from an engine space (11) capable of being covered by means of a hood (17) and which is closed all round  
10    with the exception of an access orifice (15) pointing towards the hood (17), with a continuous seal (31), surrounding the access orifice (15) all round, for gastight sealing off relative to the engine space (11), with an incoming air connection to an air inlet orifice  
15    (21) arranged in the hood (11), and with a waste air orifice (43) which is approximately congruent with a dashboard orifice (16) in the dashboard (13) serving as an intake orifice of an air consumer in the passenger space (12), and with a water separator (38),  
20    characterized by a lower shell which covers the air inlet orifice (21) in the hood (17) and is sealed off relative to the hood (17) and which can be placed onto the continuous seal (31) and, within its region surrounded by the continuous seal (31), has an air passage orifice (24), and in that the water separator (38) is formed on the lower shell (23).  
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2. The assembly space as claimed in claim 2, characterized in that the lower shell (23) is fastened to the underside of the hood (17), preferably in one piece with a hood inner panel.  
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3. The assembly space as claimed in claim 2,

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characterized in that the water separator (38) has an air guide plate (40) which projects from the lower shell (23) through the access orifice (15) and runs obliquely with respect to the axis of the access  
5 orifice (15) and which extends below part of the access orifice (15), and in that the waste air orifice (43) lies near the access orifice (15), behind the rear side, facing away from the air passage orifice (24), of the air guide plate (40).

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4. The assembly space as claimed in claim 3, characterized in that the lower shell (23) has a trough-shaped design with a trough bottom (25') and with a flangelike trough edge (26) surrounding the trough orifice, for lying on the continuous seal (31) surrounding the access orifice (15).

20 5. The assembly space as claimed in claim 4, characterized in that the trough bottom (25') projects in the manner of a lean-to roof, with a narrow and a wide roof surface (251', 252') and with an underlying roof ridge (253'), through the access orifice (15), and in that the air passage orifice (24) is arranged, preferably at a distance from the roof ridge (253'), in 25 the narrow roof surface (251'), and the wide roof surface (252') forms the air guide plate (40).

30 6. The assembly space as claimed in one of claims 1 - 5, characterized in that a cover (27) with a peripheral collar (28) and with a peripheral flange (29) arranged at one end of the collar (28) is arranged between the access orifice (15) and the lower shell (23), and in that the cover (27) lies with its peripheral flange

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(29) on the continuous seal (31) and, on its collar edge remote from the flange, carries a shell seal (30), onto which the lower shell (23) can be pressed.

5    7. An assembly space for a motor vehicle for the reception of operating assemblies, which is mounted in front of a dashboard (13) separating a passenger space (12) from an engine space (11) capable of being covered by means of a hood (17) and which is closed all round  
10    with the exception of an access orifice (15) pointing towards the hood (17), with a continuous seal (31), surrounding the access orifice (15) all round, for gastight sealing off relative to the engine space (11), with an incoming air connection to an air inlet orifice  
15    (21) arranged in the hood (11), and with a waste air orifice (43) which is approximately congruent with a dashboard orifice (16) in the dashboard (13) serving as an intake orifice of an air consumer in the passenger space (12), and with a water separator (38),  
20    characterized by a cover which covers the air inlet orifice (21) in the hood (17) and which lies on the continuous seal (31), can be sealed off relative to the hood (17) by means of a continuous hood seal (44) surrounding the air inlet orifice (21) and, within its  
25    region surrounded by the continuous seal (31), has an air passage orifice (45), and in that the water separator (38) is integrated in the cover (27).

8. An assembly space for a motor vehicle for the reception of operating assemblies, which is mounted in front of a dashboard (13) separating a passenger space (12) from an engine space (11) capable of being covered by means of a hood (17) and which is closed all round  
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with the exception of an access orifice (15) pointing towards the hood (17), with a continuous seal (31), surrounding the access orifice (15) all round, for gastight sealing off relative to the engine space (11),  
5 with an incoming air connection to an air inlet orifice (21) arranged in the hood (11), and with a waste air orifice (43) which is approximately congruent with a dashboard orifice (16) in the dashboard (13) serving as an intake orifice of an air consumer in the passenger  
10 space (12), and with a water separator (38), characterized by a lower shell (23) covering the air inlet orifice (21) in the hood (17) and sealed off relative to the hood (17) and by a cover (27) which can be sealed off relative to the lower shell (23) by means  
15 of a shell seal (30) and which lies on the continuous seal (31), and in that the water separator (38) is integrated in the cover (27), and the lower shell (23), within its region enclosed by the shell seal (30), has an air passage orifice (24).  
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9. The assembly space as claimed in claim 8, characterized in that the lower shell (23) is fastened to the underside of the hood (17) and the shell seal (30) is secured to the cover (27).

25  
10. The assembly space as claimed in claim 9, characterized in that the lower shell (23) has a trough-shaped design with a planar trough bottom (25) and a trough edge (26) surrounding the trough orifice  
30 in a flangelike manner, for lying on the shell seal (30), and in that the air passage orifice (24) is arranged in the trough bottom (25).

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11. The assembly space as claimed in one of claims  
7 - 10, characterized in that the cover (27) has a  
peripheral collar (28) and a peripheral flange (29)  
arranged at one collar edge, and in that the cover (27)  
5 lies with its peripheral flange (29) on the continuous  
seal (31) and at its collar end remote from the flange  
carries the hood seal (44) or the shell seal (30).

12. The assembly space as claimed in one of claims  
10 7 - 11, characterized in that the water separator (38)  
has an air guide plate (40) which projects from the  
cover (27) through the access orifice (15) and runs  
obliquely with respect to the axis of the access  
orifice (15) and which extends below a part of the  
15 access orifice (15), and in that the waste air orifice  
(43) lies near the access orifice (15), behind the rear  
side, facing away from the air passage orifice (24), of  
the air guide plate (40).

20 13. The assembly space as claimed in one of claims  
1 - 12, characterized by a space bottom (36) and space  
walls which project from the space bottom (36) and of  
which one space wall is formed by the dashboard (13)  
and the opposite space wall is formed by a partition  
25 (14), running transversely in the engine space (11),  
for partitioning off the engine.

14. The assembly space as claimed in one of claims  
1 - 12, characterized by its design as a plastic box  
30 closed on all sides and open at the top.

15. The assembly space as claimed in claim 13 or 14,  
characterized in that a water outflow (39) is provided

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in the space bottom (36) or in the bottom of the plastic box.